



Laboratory Oversight Role

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Outline

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Fermilab's Role

In a letter dated May 30, 1997, a few days before first review, Fermilab was asked by DOE (O'Fallon) and NSF (Eisenstein) to provide management oversight of the U.S. CMS Project.

Fermilab accepted this responsibility. The director delegated implementation to the deputy director.

- **Fermilab has three distinct roles:**
 - 1) collaborating institution,**
 - 2) host laboratory,**
 - 3) and management oversight.**



Fermilab's Role

- Fermilab operates the highest energy hadron collider; we have experience in managing the construction and operation of collider detectors for the environment of hadron collisions.
- The physics of the LHC is a natural extension of the physics of the Tevatron collider. It is broadly interesting to physicists (experimental and theoretical) at Fermilab.



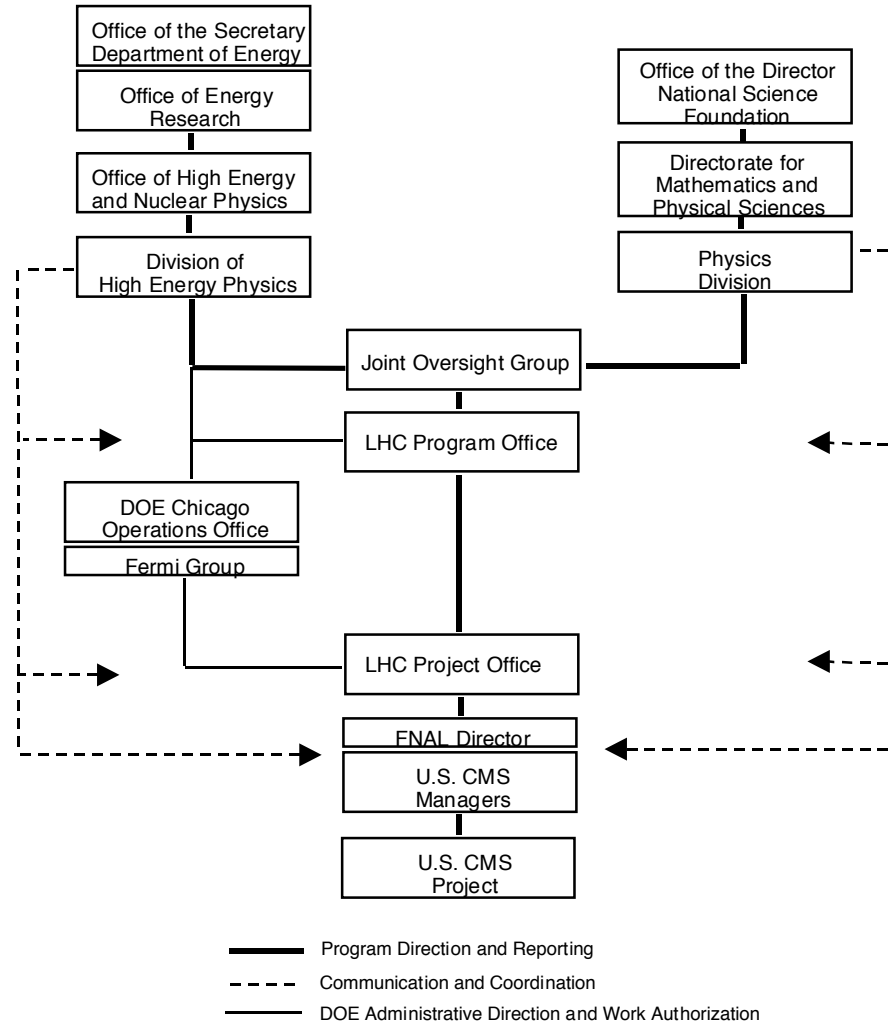
Fermilab's Role

- Existing Facilities at Fermilab are well suited and very valuable for contributing to the fabrication of major U.S. CMS deliverables.
- The LHC is an important, high priority part of the Fermilab program and we are dedicated to its success.



Project Organization

Organization of US LHC Projects





Appointment of CPM & TD

Project management has been strengthened. A full-time Construction Project Manager (Ed Temple) and a Technical Director (Dan Green) have been appointed. Don Reeder chairs the Collaboration Board and is Spokesperson pro tem.

The PM and TD report to the Deputy Director of Fermilab and through him to the DOE and NSF. The PM and TD are jointly appointed by DOE, NSF and Fermilab.

They are co-leaders of the US CMS Project with separate roles and responsibilities as delineated in the Project Management Plan. Each acts as the other's deputy when one is not available.



Construction Project Mgr.

The US CMS Construction Project Manager (PM) provides project management for the US CMS Project.

The PM is responsible for completing the US CMS Project on the agreed upon schedule, and within the agreed upon budget and scope.

He will establish and maintain an effective project organization... The PM is responsible for allocation of resources assigned to the US CMS project. ... has line management responsibility for ES&H issues (for) the US CMS project.



PM (cont'd)

The PM will develop an integrated Cost and Schedule Plan, and he approves the MOUs and annual Statements of Work for the project.

The PM has fiscal authority for US CMS project funds ... and he determines the allocation of the funds available, including contingency funds and the management reserve.

The PM and TD have the authority to jointly appoint deputy and assistant managers and sub-Project Leaders (PL).



Technical Director

The US CMS Technical Director (TD) provides programmatic and technical coordination for the US consortium's effort to construct and commission components for the CMS detector... The TD works with CMS to determine the scope of the US CMS contributions to the CMS detector.

The TD is responsible for ensuring that the technical goals of the project are appropriate and that they are achieved. The TD is the point of contact with CMS on scientific issues of scope and cost.



TD (cont'd)

The TD assists in developing an integrated Cost and Schedule Plan and he will negotiate and approve the MOUs and annual Statements of Work for the project.

The TD will maintain the L1 schedule which interfaces to the CMS general planning.



TD (cont'd)

Either the TD or the PM may identify the need for project scope changes as they arise. When scope changes are considered the TD may receive technical advice from Internal Review Committees. The TD creates such committees... Scope changes are subject to change control as described in the PMP.



Project Management Group

The Project Management Group has met about twice a month since it was formed in September 1997.

Functions as a high level configuration, cost and schedule change control board.

Initial focus was a thorough review of the project at L2 as it was scoped at the June 1997 Lehman Review with the goal of obtaining a fully supported bottoms-up cost estimate with adequate contingency. The result demonstrated the need to rescope the project. A second pass reviewed and validated the rescope project cost estimate and schedule.



Project Management Group

Membership

- Ken Stanfield - Chair

Joel Butler	John Cooper	Bruno Gobbi
Dan Green	Peter Limon	Dick Loveless
Gena Mitselmakher		Don Reeder
Steve Reucroft	Roger Rusack	Andris Skuja
Wesley Smith	Paris Sphicas	Ed Temple

(Other Attendees): Diana Fisher, Jim Hanlon,
Ed Wilmsen, Jim Yeck, others as needed.



Director's Review

Committee Membership - April 7-9, 1998

- **HCAL:** (G. Apollinari, J. Whitmore)
- **EMU:** (K. Johns, V. Polychronakis)
- **Trigger/DAQ:** (J. Blazey, V. O'Dell)
- **ECAL:** (L. Nodulman, R. Yarema)
- **Tracking:** (J. Incandela, S. Kwan)
- **Common Projects:** (J. Kerby, R. Stanek)
- **Management:**
(C. N-Holmes, J. Siegrist, W. Willis)
- **Observer:** (J. Yeck)



Management Recommendations

1. The (first Lehman) Committee recommends that the following features be incorporated in the construction Project Organization:

- Substantial oversight by host laboratory
- Host laboratory has line responsibility-
DOE/NSF-Laboratory-Deputy Director-Project
Manager-L2 Managers
- US CMS Project Manager appointed from
above with due consultation with the
collaboration;



Mgmt. Recommendations (cont'd)

- **Project Manager distinct from other leadership selected by the collaboration**
- **Distribution of funds in a tightly controlled fashion.**

2. The Committee recommends that the role of U.S. CMS Spokesperson be separated from the role of the U.S. CMS Project Manager.

#3,4,5,6,7. Will be addressed by others.



Conclusion

Fermilab is actively carrying out its oversight role.

Project management has been strengthened.

The scope of the project has been adjusted to match the available resources.

Management recommendations from the first review have been addressed.



Conclusion (Cont'd)

“The project is making good progress. We at Fermilab have developed confidence that the reduced scope of deliverables can be completed with the available funds and on the required schedule. We expect the project to be baselined at its next review.”

KCS, 1st JOG Meeting, March 18, 1998

“The committee recommends that the U.S. CMS Project should proceed with the scheduled Lehman Review.”

Report of the Director's Review Committee, April 9, 1998